

Title (en)
Method for producing strontium ranelate and its hydrates

Title (de)
Verfahren zur Synthese von Strontiumranelat und seinen Hydraten

Title (fr)
Procédé de synthèse du ranélate de strontium et de ses hydrates

Publication
EP 2042497 A1 20090401 (FR)

Application
EP 08290906 A 20080925

Priority
FR 0706731 A 20070926

Abstract (en)
Synthesizing strontium ranelate compounds (I) and their hydrates, comprises: reacting 3-cyano thiophene compound (II) with soda or potash, in water or mixture of water and organic solvent at 0-100[deg] C, to give a salt of 5-(bis-carboxymethyl-amino)-3-carboxymethyl-4-cyano-thiophene-2-carboxylic acid (III); and reacting strontium chloride with mixture of water and organic solvent at 0-100[deg] C to give (I), after the isolation. Process for synthesizing strontium ranelate compounds of formula (I) and its hydrates, comprises: reacting 3-cyano thiophene compound of formula (II) with soda or potash, in water or mixture of water and organic solvent at 0-100[deg] C, to give a salt of 5-(bis-carboxymethyl-amino)-3-carboxymethyl-4-cyano-thiophene-2-carboxylic acid of formula (III); and reacting strontium chloride with mixture of water and organic solvent at 0-100[deg] C to give (I), after the isolation. R, R1 : 1-6C alkyl, preferably CH 3; and A : Na or K. An independent claim is included for a potassium salt of 5-(bis-carboxymethyl-amino)-3-carboxymethyl-4-cyano-thiophene-2-carboxylic acid of formula (IIIb). [Image] [Image] [Image] ACTIVITY : Osteopathic. MECHANISM OF ACTION : None given.

Abstract (fr)
Procédé de synthèse industriel du ranélate de strontium de formule (I) : et de ses hydrates.

IPC 8 full level
C07D 333/38 (2006.01)

CPC (source: EP KR US)
A61P 19/00 (2017.12 - EP); **A61P 19/08** (2017.12 - EP); **A61P 19/10** (2017.12 - EP); **C07D 333/38** (2013.01 - EP US); **C07D 333/42** (2013.01 - KR)

Citation (applicant)
• WO 2007020527 A2 20070222 - GLENMARK PHARMACEUTICALS LTD [IN], et al
• EP 1403266 A1 20040331 - SERVIER LAB [FR]

Citation (search report)
• [AD] EP 0415850 A1 19910306 - ADIR [FR]
• [A] WO 2007020527 A2 20070222 - GLENMARK PHARMACEUTICALS LTD [IN], et al
• [A] EP 1403266 A1 20040331 - SERVIER LAB [FR]
• [E] DATABASE CA [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; HUANG, HANZHONG ET AL: "Method for preparing strontium ranelate heptahydrate", XP002482496, retrieved from STN Database accession no. 2008:111403 & CN 101108845 A 20080123 - TIANJIN INST PHARM RESEARCH [CN]

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AL BA MK RS

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EP 08290906 A 20080925; AP 2008004617 A 20080915; AR P080104129 A 20080924; AT 08290906 T 20080925; AU 2008221618 A 20080919; BR PI0803636 A 20080925; CA 2640041 A 20080925; CL 2008002833 A 20080924; CN 200810148917 A 20080917; CO 08099515 A 20080919; CR 10292 A 20080917; CY 101100439 T 20100517; DE 602008000790 T 20080925; DK 08290906 T 20080925; EA 200801884 A 20080925; EC SP088771 A 20080925; ES 08290906 T 20080925; FR 0706731 A 20070926; FR 2008001329 W 20080925; GE AP2008010919 A 20080922; GT 200800190 A 20080919; HN 2008001490 A 20080926; HR P20100260 T 20100511; IL 19408908 A 20080915; JO P20080427 A 20080925; JP 2008245193 A 20080925; KR 20080094125 A 20080925; MA 31243 A 20080916; ME P25210 A 20080925; MX 2008012119 A 20080923; MY PI20083603 A 20080916; NI 200800257 A 20080925; NZ 57151108 A 20080925; PA 8797001 A 20080924; PE 2008001612 A 20080915; PL 08290906 T 20080925; PT 08290906 T 20080925; RS P20100252 A 20080925; SA 08290594 A 20080920; SG 2008067878 A 20080915;

SI 200830031 T 20080925; SV 2008003033 A 20080919; TW 97136693 A 20080924; UA A200811373 A 20080919;
US 201113317114 A 20111011; US 28469508 A 20080924; UY 31341 A 20080915; ZA 200808176 A 20080925